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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,712	03/31/2004	Masao Nakano	AOY-3975US	8768
23122	7590	05/25/2007		
RATNERPRESTIA			EXAMINER	
P O BOX 980			BERTHEAUD, PETER JOHN	
VALLEY FORGE, PA 19482-0980				
			ART UNIT	PAPER NUMBER
			3746	
			MAIL DATE	DELIVERY MODE
			05/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/814,712

Applicant(s)

NAKANO ET AL.

Examiner

Peter J. Bertheaud

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/31/04, 12/4/06, 1/25/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities: In line 9, the term "ant" should be changed to --and--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In lines 3 and 4 of claim 2, the phrase "first end surface... having a higher precision than the second end surface" is vague and indefinite because it is not clear how the surface would be more "precise". In what way does it have a high precision? Is this the correct word for the claim's intended meaning?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawai JP 2-283887 in view of Aiba 6,371,739.

Sawai discloses a refrigerant pump comprising a sealed casing 1; an electric motor having a stator 2 disposed outside the sealed casing 1 and a rotor 4 disposed within the sealed casing 1; a pump mechanism 7 juxtaposed with the electric motor; and a drive shaft 18 for transmitting a rotational force of the rotor to the pump mechanism 7. Sawai further discloses that the drive shaft 18 has a large-diameter portion (see portion of 18 that line A-A cuts through) having first (right side) and second end (left side) surfaces opposite to each other, the first end surface positioned remote from the electric motor and could have a higher precision than the second end surface. However, Sawai does not teach the following claimed limitations taught by Aiba.

Aiba teaches an electric motor driven pump comprising a stator 8 disposed and a rotor 2 disposed within a sealed casing 11; a pump mechanism 3 juxtaposed with the electric motor 1; and a drive shaft 4 for transmitting a rotational force of the rotor 2 to the pump mechanism 3, wherein the stator 8 is positioned closer to the pump mechanism than the rotor 2 is.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump of Sawai, by positioning the stator closer to the pump mechanism than the rotor in order to create a magnetic attractive force in a direction opposite the offset direction of the rotor (Aiba, col. 3, lines 28-34).

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6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawai JP 2-283887 in view of Aiba 6,371,739 and in further view of Akita 5,490,730.

Sawai in view of Aiba discloses the invention as discussed above. However, Sawai in view of Aiba does not teach the following claimed limitations taught by Akita.

Akita teaches a slide bearing assembly comprising a shaft 10 and a bush 9. Akita further teaches that the shaft is carburized and nitrited (see col. 4, lines 44-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump of Sawai in view of Aiba, by carburizing and/or nitriding the drive shaft in order to promote higher wear resistance (Akita, col. 4, lines 56-60).

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawai JP 2-283887 in view of Akita 5,490,730.

Sawai discloses a refrigerant pump comprising a sealed casing 1; an electric motor having a stator 2 disposed outside the sealed casing 1 and a rotor 4 disposed within the sealed casing 1; a pump mechanism 7 juxtaposed with the electric motor; and a drive shaft 18 for transmitting a rotational force of the rotor to the pump mechanism 7; and a bearing 13, 23 for rotatably supporting the drive shaft 18. Sawai further teaches that the refrigerant pump could be oil free. However, Sawai does not teach the following claimed limitations taught by Akita.

Akita teaches a slide bearing assembly comprising a shaft 10 and a bush 9. Akita further teaches that the shaft is carburized and nitrited (see col. 4, lines 44-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump of Sawai in view of Aiba, by carburizing and/or nitriding the drive shaft in order to promote higher wear resistance (Akita, col. 4, lines 56-60). In reference to claim 5, the addition or subtraction of oil from the refrigerant pump is not structurally limiting and therefore receives little patentable weight.

Conclusion


8. The prior art made of record, noted in form 892, and not relied upon is considered pertinent to applicant's disclosure.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Bertheaud whose telephone number is (571) 272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


PJB 5/17/07


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